

Listing of Claims:

1-4. (Cancelled)

5. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is fluidically connected to the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, wherein at least one of the first electrode and the second electrode provides a hollow interior that the printing fluid passes through and includes an electrically conductive coating disposed over an electrically conductive substrate, and wherein the electrically conductive coating is permeable to printing fluid and is configured to increase the effective surface area of the electrode accessible to the printing fluid.

6. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is fluidically connected to the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, and wherein at least one of the first electrode and the second electrode provides a hollow interior that the printing fluid passes through and includes an electrically conductive coating made at least partially from an electrically conductive polymer, and disposed over an electrically conductive substrate.

7. (Original) The printing device of claim 6, wherein the electrically conductive polymer is selected from the group of electrically conductive polymers consisting of polypyrroles, polyanilines, polythiophenes, conjugated bithiazoles and bis-(thienyl) bithiazoles.

8. (Original) The printing device of claim 6, wherein the electrically conductive polymer is cross-linked.

9. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is fluidically connected to the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, and wherein at least one of the first electrode and the second electrode provides a hollow interior that the printing fluid passes through and includes an electrically conductive coating resistant to corrosion by printing fluid disposed within an electrically conductive substrate.

10-15. (Cancelled)

16. (Previously Presented) The printing device of claim 9, wherein the electrically conductive coating is a protective polymer coating, further comprising a printing fluid-permeable electrically conductive polymer coating disposed over the protective polymer coating.

17. (Cancelled)

18. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is in fluid communication with the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, wherein at least one of the first electrode and the second electrode provides a hollow interior that the printing fluid

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passes through and includes an electrically conductive coating permeable to printing fluid disposed over an electrically conductive substrate, and wherein the electrically conductive coating includes a plurality of interior surfaces contactable by the printing fluid.

19. (Original) The printing device of claim 18, wherein the electrically conductive coating is porous.

20. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is in fluid communication with the printing fluid reservoir; and

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, and wherein at least one of the first electrode and the second electrode provides a hollow interior that the printing fluid passes through and includes an electrically conductive coating at least partially made of a polymer that is permeable to the printing fluid, the electrically conductive coating being disposed within an electrically conductive substrate.

21. (Original) The printing device of claim 20, wherein the polymer is selected from the group consisting of polypyrroles, polyanilines, polythiophenes, conjugated bithiazoles and bis-(thienyl) bithiazoles.

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22. (Original) The printing device of claim 20, wherein the polymer is cross-linked.

23. (Cancelled)

24. (Previously Presented) A printing device configured to print a printing fluid onto a printing medium, the printing device comprising:

a printing fluid reservoir configured to hold a volume of the printing fluid;

a print head assembly configured to transfer the printing fluid to the printing medium, wherein the print head assembly is in fluid communication with the printing fluid reservoir;

a printing fluid detector configured to detect a characteristic of the printing fluid, wherein the printing fluid detector includes a first electrode and a second electrode configured to be in contact with the printing fluid, and wherein at least one of the first electrode and the second electrode includes provides a hollow interior that the printing fluid passes through and an electrically conductive coating permeable to printing fluid disposed within an electrically conductive substrate; and

an electrically conductive protective coating disposed between the electrically conductive substrate and the electrically conductive coating permeable to printing fluid, wherein the protective coating is at least partially made of a TEFLON material.

25-28. (Cancelled)

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29. (Previously Presented) The printing device of claim 16, wherein the printing fluid-permeable electrically conductive polymer coating is made at least partially of a material selected from the group consisting of polypyrroles, polyanilines, polythiophenes, conjugated bithiazoles and bis-(thienyl) bithiazoles.

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